

FL OSS BELL SOUTH'S THIRD AMENDED RESPONSE TO AMENDED EXCEPTION 6



Florida OSS Test
Amended Exception 6

September 27, 2001

EXCEPTION REPORT

An exception has been identified as a result of the test activities associated with the process verification review for Interface Development (PPR 5).

Exception:

BellSouth lacks an appropriate process, methodology and robust test environment for testing of the electronic data interchange (EDI) interface.

Background:

The first step for a CLEC planning to execute transactions on BellSouth's EDI production systems is for the CLEC to develop an EDI software interface. To accomplish this, the CLEC follows BellSouth's EDI interface development process which includes acquiring specifications and following a test plan that will lead to certified connectivity with BellSouth's EDI production systems. Once certified, the CLEC can execute customer transactions with BellSouth.

To facilitate market entry by a CLEC, BellSouth should make available a robust test environment for the EDI interface.

Issue:

CLECs that seek to test the EDI machine to machine interface during the establishment of system connectivity do not have an adequate test environment available.

BellSouth's current EDI test environment does not offer the functionality to enable a CLEC to thoroughly test its EDI interface prior to connecting to BellSouth's production systems. Some of the elements KPMG Consulting would expect BellSouth's EDI test environment and test processes to include are:

- Ability for a CLEC to create valid electronic test transactions that will process completely through BellSouth's ordering, billing and provisioning systems. In BellSouth's existing process, when a CLEC sends test transactions to BellSouth's test environment the transactions are not processed by either billing or provisioning systems. The only system generated confirmation is a Firm Order Confirmation (FOC), which indicates simply that an order was received and processed through the ordering system. The CLEC is not notified of the test transaction's success or failure by BellSouth's EDI systems directly. In a production environment, a Billing

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Completion Notice [BCN] and Provisioning Completion Notice [PCN] are system generated upon successful processing.

Current BellSouth testing methodology does not allow a CLEC to ensure that the test transactions generated by a CLEC's EDI system can be processed end-to-end by BellSouth systems successfully upon reaching the production environment.

- BellSouth test cases with expected input and output data that will facilitate the CLEC's ability to validate a developed EDI interface before and after connecting to BellSouth's test or production environment. All BellSouth test cases should be of sufficient breadth and depth to allow a CLEC to robustly and thoroughly test all facets of its EDI interface to ensure it has met BellSouth specifications.
- Consistent and documented process for creation of CLEC specific test cases. A CLEC should have the ability to develop an overall test approach or plan that is consistent with its intended business model.
- Documented test processes and expected timelines. A CLEC should have access to information outlining the entire process prior to commencing development for business planning purposes.
- CLECs that have already entered the market require consistent and documented processes, timelines, and a test environment that will permit them to test new changes or releases prior to their introduction into the production environment. As changes are made to BellSouth's EDI systems (e.g., software, specifications, business rules, etc.) that require a CLEC to upgrade its own EDI interface to continue to be able to conduct transactions, the test environment should be updated in a controlled fashion that will permit a CLEC to test these system changes before they are used with live data or on production systems. The CLEC should be provided with reasonable notification.

Amendment—In response to the BellSouth request for more detail regarding the proposed EDI test environment, KPMG Consulting agreed to develop a more detailed description of the types of elements typically found in the test environment. KPMG Consulting would expect, at a minimum, the following elements to be included in a comprehensive EDI test environment:

1. Detailed description of the complete functionality and operation of the proposed EDI test environment (down to the computer system level).
2. Capacity and availability of the proposed EDI test environment.
3. Computing and network architecture of the proposed EDI test environment.
4. Types and version of software to be used in the proposed EDI test environment.
5. Standard template or process for developing a CLEC Test Agreement.
6. Documented process for developing a CLEC EDI interface test plan.

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7. CLEC requirements for connecting to the proposed EDI test environment.
8. Documented process for the creation, use, and modification of BellSouth and CLEC test data. Complete test cases would include expected outputs.
9. Detailed flow of events for submitted test transactions, including the types of messaging (automated and manual) that will be exchanged between the CLEC EDI interface and the proposed BellSouth EDI test environment.
10. Documented process that guides a new CLEC EDI trading partner (i.e., new entrant) through the steps necessary—from initiating the EDI interface development process through to the cutover into a production environment. I.e. an end-to-end view of the EDI interface development/connectivity process.
11. Documented process that guides an existing CLEC EDI trading partner through the necessary steps for a new EDI system release—from connecting to the proposed EDI test environment to developing and testing against the new system release through to the cutover into a production environment. I.e. an end-to-end view of the EDI interface development/connectivity process for a new software release that includes:
 - Intervals.
 - Milestones.
 - Software version control and availability.
 - Testing.
 - Software migration.
12. Quality assurance processes BellSouth would employ to ensure the software in the proposed EDI test environment is equally functional and stable to that in the production environment.
13. Documented process for notifying the CLEC community on events regarding the proposed EDI test environment.
14. Process for providing support to a CLEC operating in the proposed EDI test environment, including the ability to report, track, and escalate issues.

Impact

Due to deficiencies in the current EDI test environment, CLECs have difficulty in developing defect free interfaces. This has an impact on a CLECs ability to develop and deliver uninterrupted service to its customers.

BellSouth Amended Response

The following addresses the amended KPMG exception regarding new entrant CLEC testing.

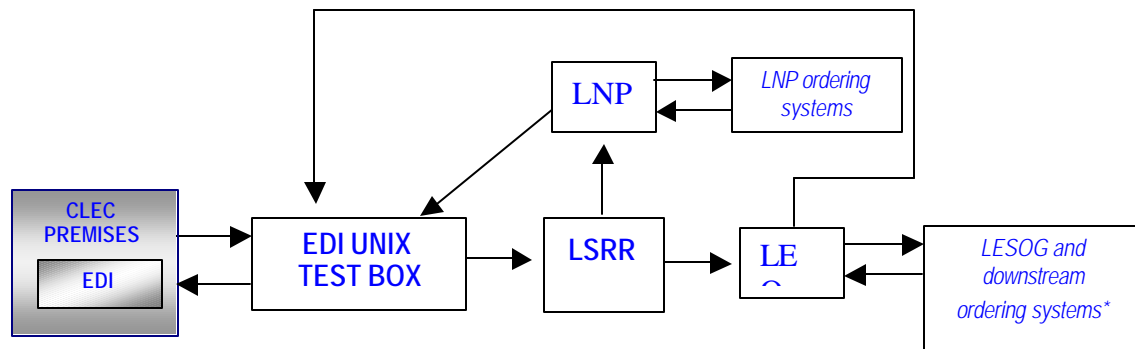
1. Detailed description of the complete functionality and operation of the EDI test environment (down to the computer system level).

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EDI CLEC Interface Testing (CIT) is required for new BellSouth trading partners and for trading partners who change their EDI connectivity or move to a new TCIF version of local exchange ordering. This testing is designed to ensure connectivity with the CLEC, that the CLEC can send and receive ANSI ASC X12 compliant documents, and that the data content provided by the CLEC is meaningful to the BellSouth local exchange ordering systems. Successful CLEC Interface Testing is a prerequisite to CLECs being provided access to BellSouth's production environment.

EDI CLEC Interface Testing (CIT) for new entrant CLECs is performed in a "test" environment that is separate from the "production" environment used to place live orders. Although the test environment is separate from the production environment, the same EDI map and application software versions are in place to simulate the BellSouth production ordering environment. The EDI CIT environment is described below.

CLEC Interface Testing (CIT) EDI Environment



** Systems downstream of LESOG are production—not test—systems.*

Once a CLEC's testing has been deemed successful in the CIT environment by the BellSouth account representative and EDI testing personnel, the CLEC is provided connectivity to the production environment. Once a CLEC is production-certified, they may send live orders.

A production-certified CLEC may also elect to use BellSouth's CLEC Application Verification Environment (CAVE) to test release-related changes to their software. The CAVE environment differs from the CIT and production environments in that the versions of EDI maps and downstream application software are those that have been built as a result of an upcoming release. CLECs are able to test their systems against the EDI maps and application software prior to them being placed into production (and CIT).

In summary, CLECs initially test in the CIT EDI environment and upon successful completion of testing are provided access to BellSouth's production environment. At that time, they may also take advantage of yet another test environment--BellSouth's CAVE environment.

The following is a description of the systems in the CIT testing environment:

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EDI (Electronic Data Interchange) – A BellSouth supported data communication and translation interface using Mercator and Sterling Commerce products.

- The EDI translator is a UNIX server based system.
- EDI provides communication via CONNECT:Direct™ and data translation between CLEC's ANSI ASC X12 and BellSouth application formats for local exchange orders. EDI interfaces with LEO/LSRR and the LNP systems .

LSRR (Local Service Request Router) - an electronic traffic routing mechanism

- The LSRR routes NON-LNP and LNP traffic via electronic navigator contracts.
- The LSRR interfaces with LEO and LNP OSS platform systems for subsequent order validation and data storage.

LNP (Local Number Portability) - A BellSouth maintained electronic database and order generator

- LNP is a UNIX server based system.
- LNP provides both data storage and order generation for all LNP orders initiated by trading partners.

LEO (Local Exchange Ordering) - A BellSouth maintained electronic database

- LEO is a mainframe based system
- LEO provides a robust, electronic data storage for all orders initiated by trading partners except local number portability and xDSL orders.
- LEO interfaces with the LESOG system for service order processing by sending data via navigator contracts.

2. Capacity and availability of the EDI test environment.

CLEC testing in the EDI CIT environment is scheduled Monday through Friday from 8 AM – 5 PM CST, excluding BellSouth holidays and scheduled downtimes. Generally, the EDI testing team schedules testing with only 2 to 3 CLECs simultaneously. Special conditions are accommodated on an individual case basis.

3. Computing and network architecture of the EDI test environment.

The physical configuration of the EDI CIT environment is as follows:

EDI-1 Sun Solaris System (E450, 4CPU, 3GB memory, 7 internal 9 GB disk drives)

LEO-Mainframe control region with 4 message processing regions (MVS 390 IBM System); LESOG-1 HP-UX 11.0 System (T520 UX, 4 CPU, 4GB memory, 10 disks)

LNP-1 HP K580-UX, 2 HP J460-UX & 1 HP K360-UX (K580 10.20 system, 4CPU, 3GB memory, 10 internal 9 GB disks, 2-K460 10.20 system, 6 CPU total, 2 GB memory, K360 10.20 system, 2 CPU, 1GB memory)

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4. Types and version of software to be used in the EDI test environment.

The EDI software in the CIT environment mirrors that of the EDI production Environment.

EDI Translation Software – Mercator Commerce Broker™, ver. 5.0

Database product – Oracle Enterprise™ Edition, ver. 8.1.6

Communications product – CONNECT:Direct™, MVS ver. 3, Release 2, Put level 3208; UNIX ver. 3.3

Encore Maps - Currently Release 9.2.1. These maps are updated in both CIT and Production environments each time there are map changes.

5. Standard template or process for developing a CLEC Test Agreement.

The “Electronic Interface Implementation and Upgrade Plan,” the “Electronic Interface Testing Guidelines,” and the “Electronic Interface Test Agreement” documents are used by the BellSouth account team to develop a Testing Agreement with CLECs wishing to perform EDI business with BellSouth. Additionally, the EDI team uses a “Data Transformation Group EDI Testing Agreement” to gather and disseminate information when bringing a new trading partner on board. This EDI Testing Agreement is published in the “BellSouth EDI Specifications” which are posted to the following website:

http://www.interconnection.bellsouth.com/guides/html/guides_leo4.html

The other Electronic Interface documents can be found at the following website:

<http://www.interconnection.bellsouth.com/carriertypes/lec/html/eiitd.html>

6. Documented process for developing a CLEC EDI Interface Test Plan.

A process for developing an EDI interface test plan can be found in the “Electronic Interface Testing Guidelines” and “Electronic Interface Test Agreement” template. These documents are used by the CLEC Test Group and the Account Team to fashion a proposed test plan for a CLEC. (Documentation can be found at the website address listed in response to question #5)

7. CLEC requirements for connecting to the proposed EDI test environment.

CLECs have two options for connecting to BellSouth’s CIT environment: Value Added Network (VAN) or by usage of a CONNECT:Direct™ communications product. Both options are described in the “EDI Testing Guidelines for CLECs” chapter of the “BellSouth EDI Specifications” posted to the BellSouth interconnection website. (Documentation can be found at the website address listed in response to question #5)

8. Documented process for the creation, use, and modification of BellSouth and CLEC test data. Complete test cases would include expected outputs.

In the CIT environment test cases (scenarios) and test data are negotiated with each CLEC. CLECs utilize their own company codes as much as possible in the CIT

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environment. Some test scenarios may dictate use of BellSouth and/or CLEC test data. The expected results of the test data is communicated during testing negotiations between the CLEC, CLEC Test Group, EDI Test Group, and the Account Team.

9. Detailed flow of events for submitted test transactions, including the types of messaging (automated and manual) that will be exchanged between the CLEC EDI interface and the BellSouth EDI test environment.

The flow of events for test transactions will be automated and will mimic the production environment with respect to the sending of 850/860s and the return of 855/865s. Functional Acknowledgments (997s) will continue to be a required document exchange. This flow of events is documented in the “EDI Testing Guidelines for CLECs” chapter of the “BellSouth EDI Specifications.” Additional procedures are contained in the “Electronic Interface Testing Guidelines” document. (Documentation can be found at the website addresses listed in response to question #5)

10. Documented process that guides a new CLEC EDI trading partner (i.e., new entrant) through the steps necessary—from initiating the EDI interface development process through to the cutover into a production environment, i.e. an end-to-end view of the EDI interface development/connectivity process.

These procedures are described in the BellSouth EDI Specifications’ chapter entitled “EDI Testing Guidelines for CLECs”, “Electronic Interface Implementation and Upgrade Plan” and the “Electronic Interface Testing Guidelines” documents. These documents reflect the procedures a CLEC must follow before entry into production. These procedures are managed, documented, and enforced by the CLEC’s BellSouth account team. (Documentation can be found at the website address listed in response to question #5)

11. Documented process that guides an existing CLEC EDI trading partner through the necessary steps for a new EDI system release—from connecting to the proposed EDI test environment to developing and testing against the new system release through to the cutover into a production environment. I.e. an end-to-end view of the EDI interface development/connectivity process for a new software release that includes:

Intervals.

Milestones.

Software version control and availability.

Testing.

Software migration.

The CIT environment is for new entrant CLECs. This question would be applicable to the CAVE environment.

12. Quality assurance processes BellSouth would employ to ensure the software in the EDI test environment is equally functional and stable to that in the production environment.

The CIT environment contains the most current version of the EDI maps in production. The software in CIT is upgraded as the production environment is upgraded. Each

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software release undergoes the following tests, which comprise BellSouth's quality assurance that the software is ready for implementation in production:

System Test - tests all new functionality

System Integration Test - tests the new functionality interfaced to downstream systems

Regression Test - re-tests all functionality that was not impacted in the release

User Acceptance Test - simulates CLEC use in production

These procedures are part of quality assurance measures used by the EDI group and the overall Encore team as part of release-related activities.

13. Documented process for notifying the CLEC community on events regarding the EDI test environment.

Since the CIT environment is upgraded at the same time as the production environment, the CLEC community is informed of events regarding EDI via a web based mechanism and/or Change Control.

14. Process for providing support to a CLEC operating in EDI test environment, including the ability to report, track, and escalate issues.

The process for providing support to a CLEC operating in an EDI test environment can be found in the Electronic Interface Test Agreement and the Electronic Interface Testing Guidelines. (Documentation can be found at the website address listed in response to question #5)

BellSouth Second Amended Response:

Regarding Item 8, KPMG Consulting requested the documented process BellSouth utilizes to determine if test data will be BellSouth or CLEC provided, and for providing the expected results to the CLEC. KPMG also requested clarification as to whether the "BellSouth Encore Solution Delivery CAVE UAT Plan" would be used for the EDI test, in addition to CAVE.

BellSouth Response: The CIT environment is separate from the CAVE environment and therefore has separate processes in place. The process BellSouth uses to determine test case data used by the CLEC in the CIT environment, as well as validating the expected results, is stated in the internal "CLEC and Vendor Testing Process" document (see attached). Those instances where CLEC-provided test data is required are detailed in point 5 of the General Overview of that document.

Expected test results are logged on CLEC Testing Summary sheets (attached) that are sent daily to CLECs/Vendors during the testing process. This CLEC Testing Summary is referenced throughout the internal "CLEC and Vendor Testing Process," the internal "Electronic Interface Implementation and Upgrade Internal Communication Plan" (attached), and external "Electronic Interface Testing Guidelines" documents.

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Regarding Item 14, KPMG indicated that the Electronic Interface Testing Guidelines is not an internal process document. The Electronic Interface Test Agreement is not an internal process document, nor does it address the process for providing support to a CLEC operating in EDI test environment, including the ability to report, track, and escalate issues.

KPMG Consulting asked to review the BellSouth process for support of a CLEC during EDI testing including the reporting of problems by CLECs, process BellSouth would follow to track issues and process BellSouth would follow to notify CLEC(s) of fixes.

BellSouth Response: A CLEC's support during EDI testing is managed by the Account Team. Test case results, which would identify any issues found during testing, are tracked via "CLEC Testing Summary" sheets (attached) which are provided to CLECs on a daily basis. The internal Escalation Process utilized during testing is discussed in the Escalation Process chapter of the internal "CLEC and Vendor Testing Process" document (attached). This process would be followed should a CLEC report a problem identified during testing. Contact information for Account Team use is contained in Appendix B of the internal "Electronic Interface Implementation and Upgrade Internal Communication Plan" (referenced in our amended response to point 8, above).

BellSouth Third Amended Response:

KPMG requested clarification on the following two items.

Clarification 1:

What releases are supported in BellSouth's EDI test environment for new entrant CLECs? Where is this documented?

BellSouth Response: Validity testing is conducted on the most current Encore release in the test environment. This information will be included in both internal and external Electronic Interface Implementation and Upgrade Communication Plans. Both plans will be updated on October 15 to include this release information.

Clarification 2:

After a new TCIF version map has been implemented, how long will BellSouth keep the old map available in the EDI test environment for new entrant CLECs? Where is this documented?

BellSouth Response: BellSouth prepared an amended Appendix D to the Change Control Process documentation that addresses this issue. Part of Appendix D states that BellSouth's objective is to implement industry guidelines in a timely manner. Therefore, in an effort not to adversely impact either CLECs or BellSouth when migrating to another industry guideline version, CLECs should consider using the most recent industry guidelines version as much as possible. Appendix D also states that after a new industry guidelines release, the previous release will be frozen and CLECs can continue to

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implement/migrate to this frozen industry guideline version for 90 days thereafter, only if their software platform version has been BellSouth certified prior to the freeze start date. This updated CCP document was presented to the CCP board at the 9/26/01 status meeting. CLEC feedback will be an agenda item for the October CCP status meeting.